

WHAT IS CLAIMED IS:

1. A prophylactic/remedy for immunopathy comprising, as an active ingredient, modifications of Staphylococcal enterotoxin B (SEB) with substitution of at least one amino acid residues within the amino acid sequence of natural type SEB, or derivatives thereof, wherein said SEB modifications or derivatives thereof have inhibitory activity on T cell activation wherein they interact with specific V β component of T cell receptor (TCR) but are reduced in their immunological responsiveness to SEB without inducing elimination of T cells having specific V β component, the elimination being normally induced by natural type SEB or recombinant wild-type SEB.

2. The prophylactic/remedy for immunopathy of claim 1 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 9-position on the basis of natural type SEB with a protein-constituting amino acid other than aspartic acid, or derivatives thereof.

3. The prophylactic/remedy for immunopathy of claim 2 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 9-position on the basis of natural type SEB with asparagine.

4. The prophylactic/remedy for immunopathy of claim 1 wherein said SEB modifications or derivatives

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thereof are SEB having amino acid substitution at the 23-position on the basis of natural type SEB with a protein-constituting amino acid other than asparagine, or derivatives thereof.

5 5. The prophylactic/remedy for immunopathy of claim 4 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 23-position on the basis of natural type SEB with tyrosine, aspartic acid, isoleucine or lysine, or derivatives thereof.

10 6. The prophylactic/remedy for immunopathy of claim 1 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 41-position on the basis of natural type SEB with a protein-constituting amino acid other than isoleucine plus amino
15 acid substitution either at the 44-position with a protein-constituting amino acid other than phenylalanine or at the 45-position with a protein-constituting amino acid other than leucine, or derivatives thereof.

20 7. The prophylactic/remedy for immunopathy of claim 6 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 41-position on the basis of natural type SEB with arginine or threonine plus amino acid substitution either at the 44-position with valine or at the 45-position with valine, or
25 derivatives thereof.

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8. The prophylactic/remedy for immunopathy of claim 1 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 44-position on the basis of natural type SEB with a protein-constituting amino acid other than phenylalanine, or derivatives thereof.

9. The prophylactic/remedy for immunopathy of claim 8 wherein said SEB modifications or derivatives thereof are SEB having amino acid substitution at the 44-position on the basis of natural type SEB with serine, or derivatives thereof.

10. The prophylactic/remedy for immunopathy of claim 9 which is for oral administration.

11. The prophylactic/remedy for immunopathy of claim 10 which is an aqueous solution having pH and ionic strength that are physiologically acceptable.

12. The prophylactic/remedy for immunopathy of claim 11 wherein a substance selected from the group consisting of carbohydrates, sugars, sugar alcohols and amino acids is present in an amount sufficient for providing the solution with a physiologically acceptable tonicity.

13. The prophylactic/remedy for immunopathy of any one of claims 1 to 12 which is used for prophylactic/remedy of rheumatoid arthritis.

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